NASA Trace Gas Products for Air Quality Applications

- NASA Remote Sensing Training

September 2014

ARSET

Applied Remote SEnsing Training

A project of NASA Applied Sciences

Access to OMI NO_2 Images and Data

GIOVANNI

http://disc.sci.gsfc.nasa.gov/giovanni

L2G, Level 3 (OMNO2d)

HDF, ASCII KML for Google Earth

Subsetting available

AVDC (Aura Validation Data Center)

http://avdc.gsfc.nasa.gov/

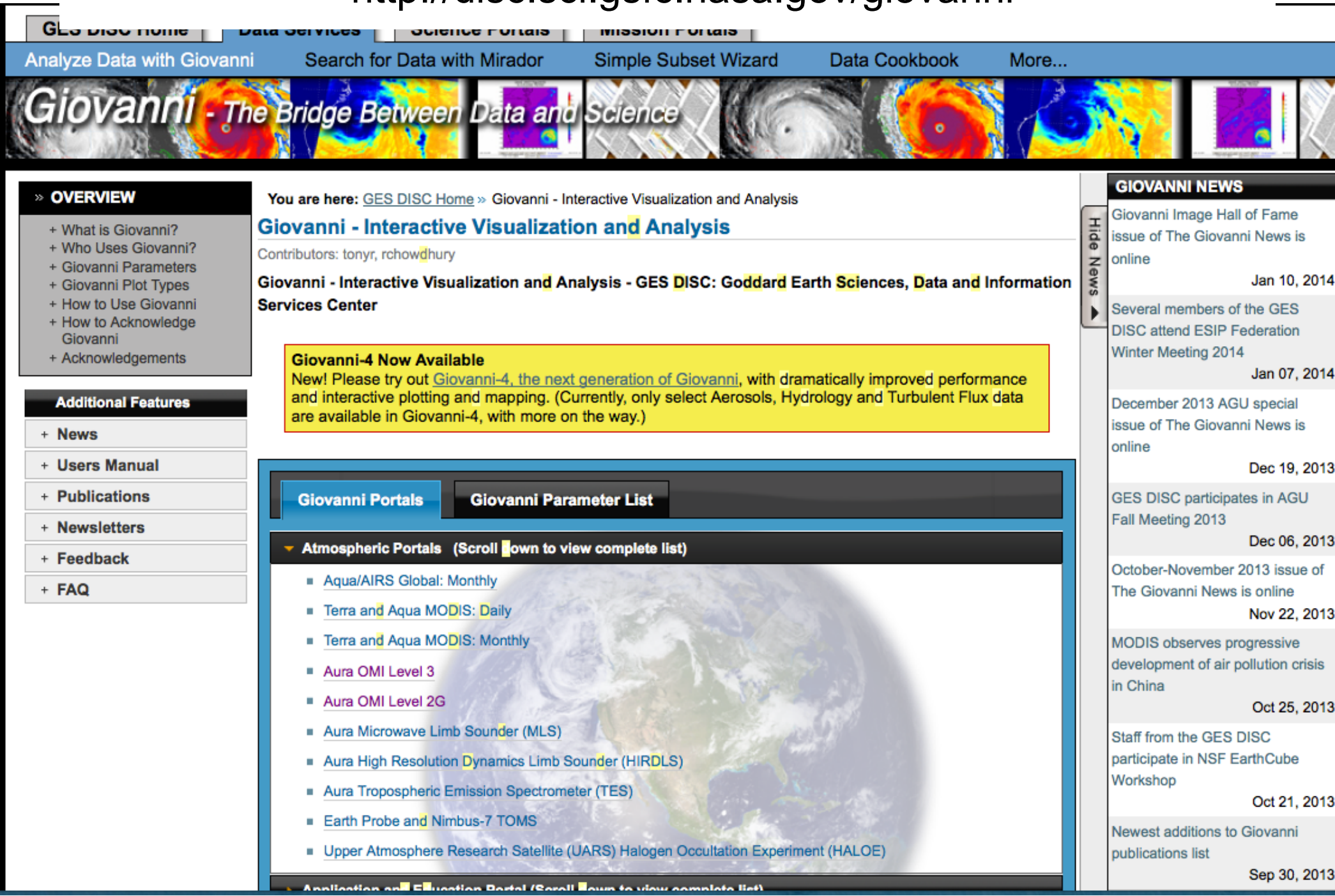
Level 3 (OMNO2d)

HDF, ASCII, KML formats

Daily and Monthly Data and Images

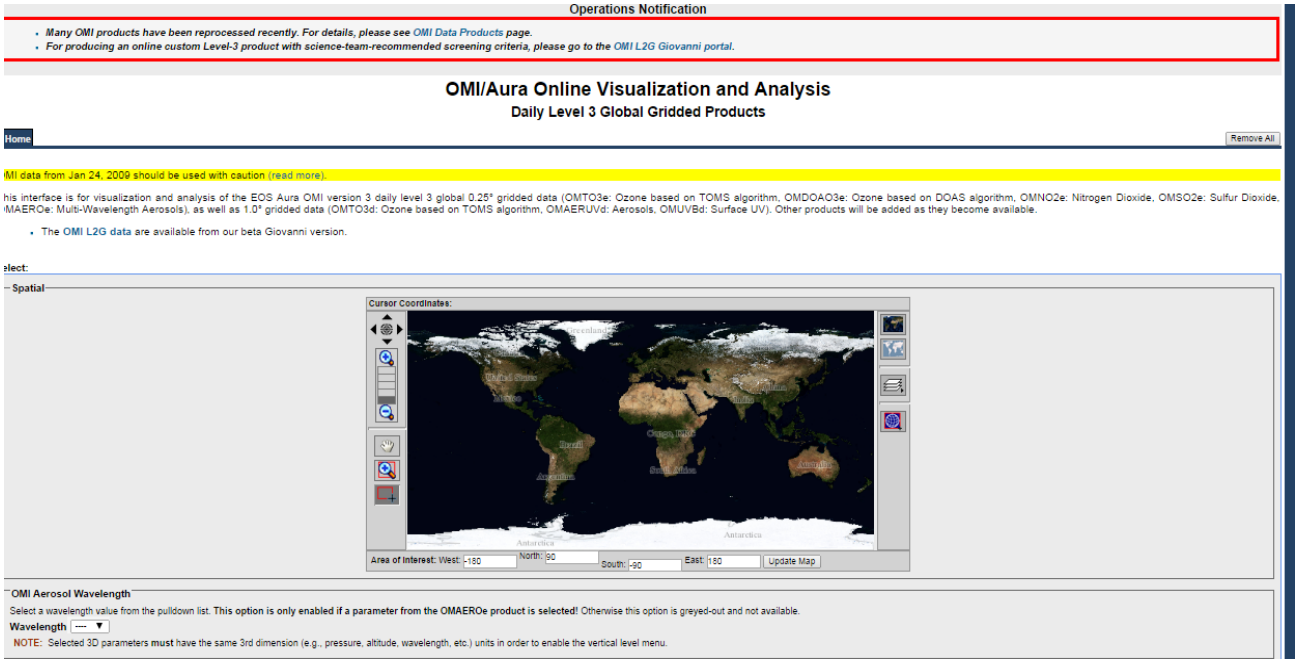
GIOVANNI – Visualization/Exploratory Tool

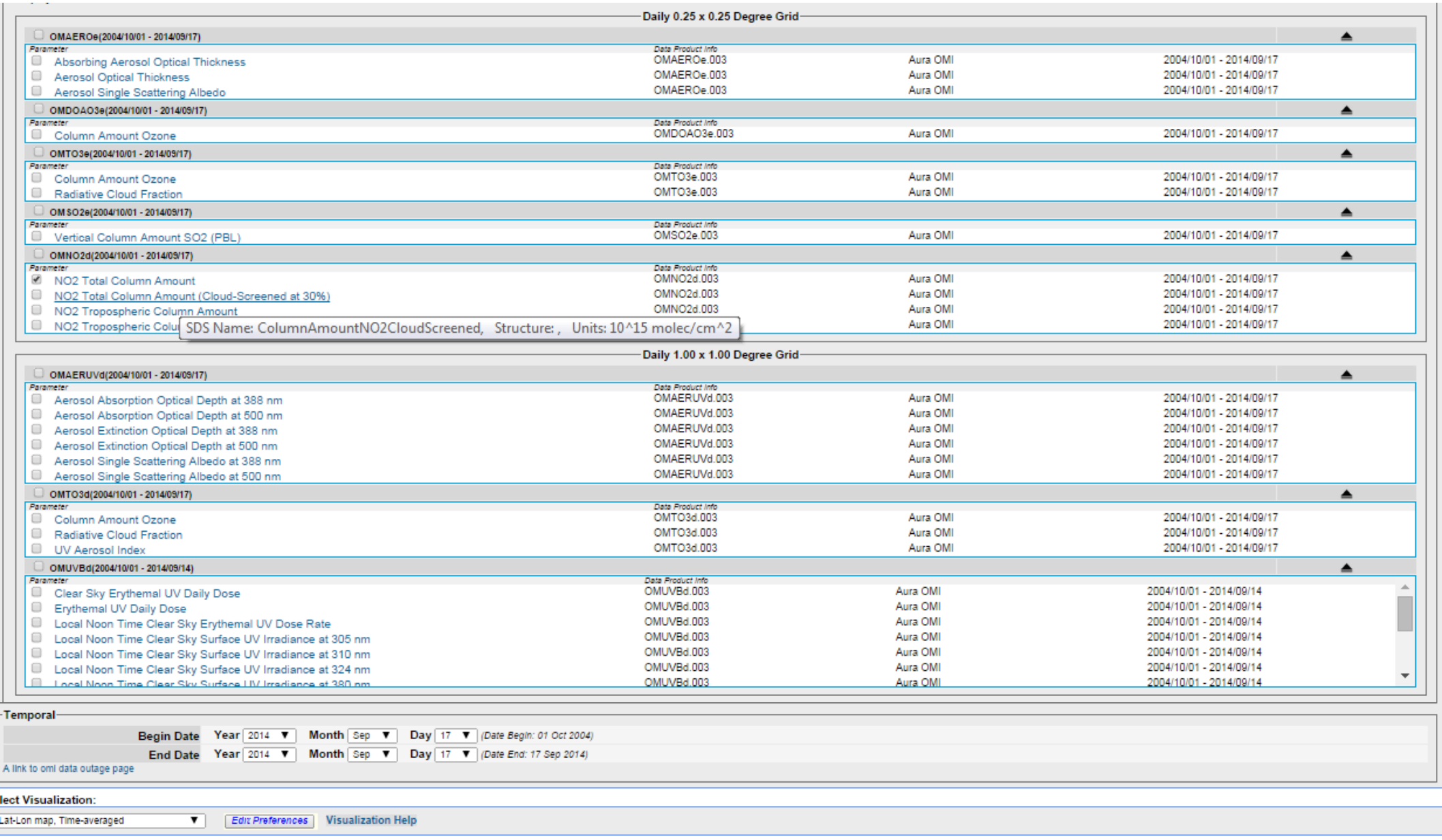
http://disc.sci.gsfc.nasa.gov/giovanni



Aura OMI Level 3

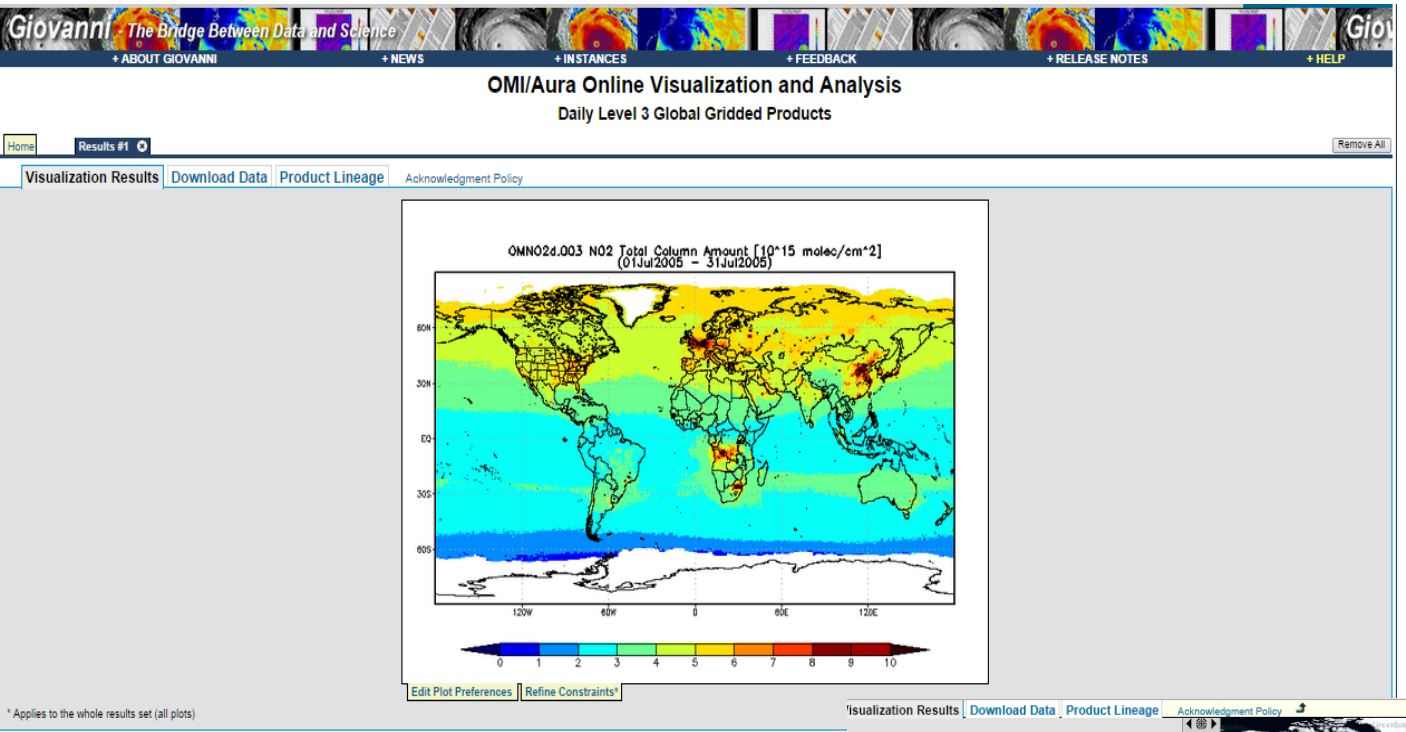
- Subset using bounding box

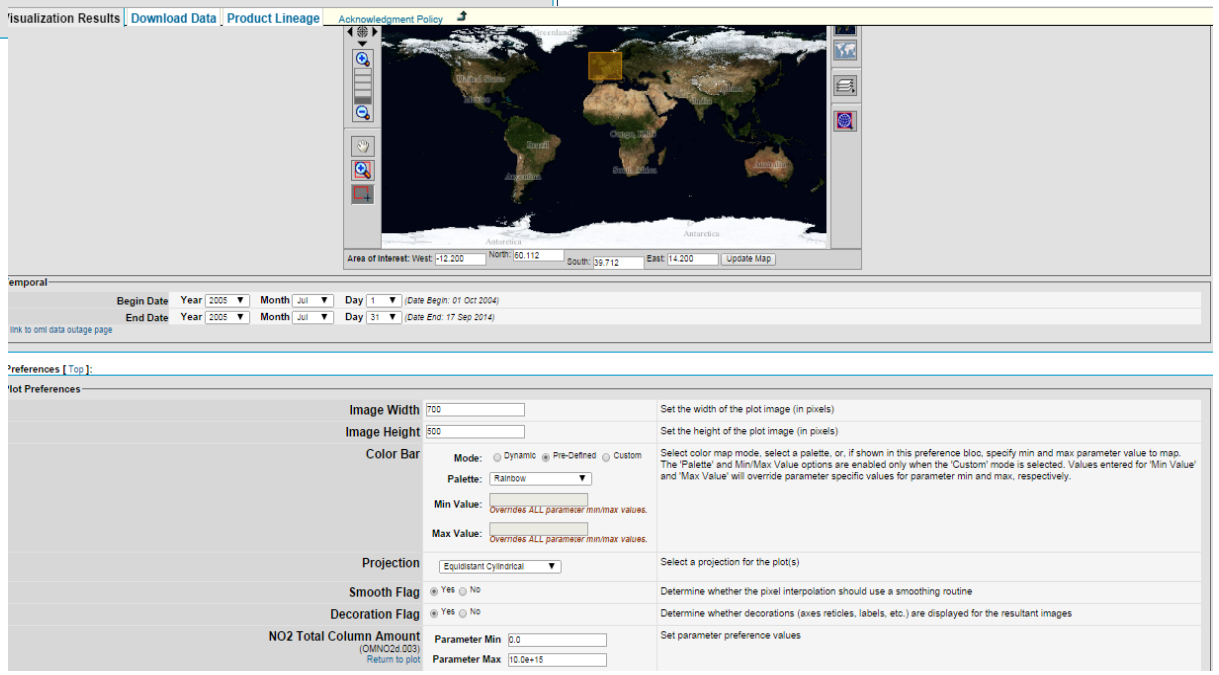




Parameter List form Aura OMI

- NO2 total column amount
- Choose date range and Visualization type

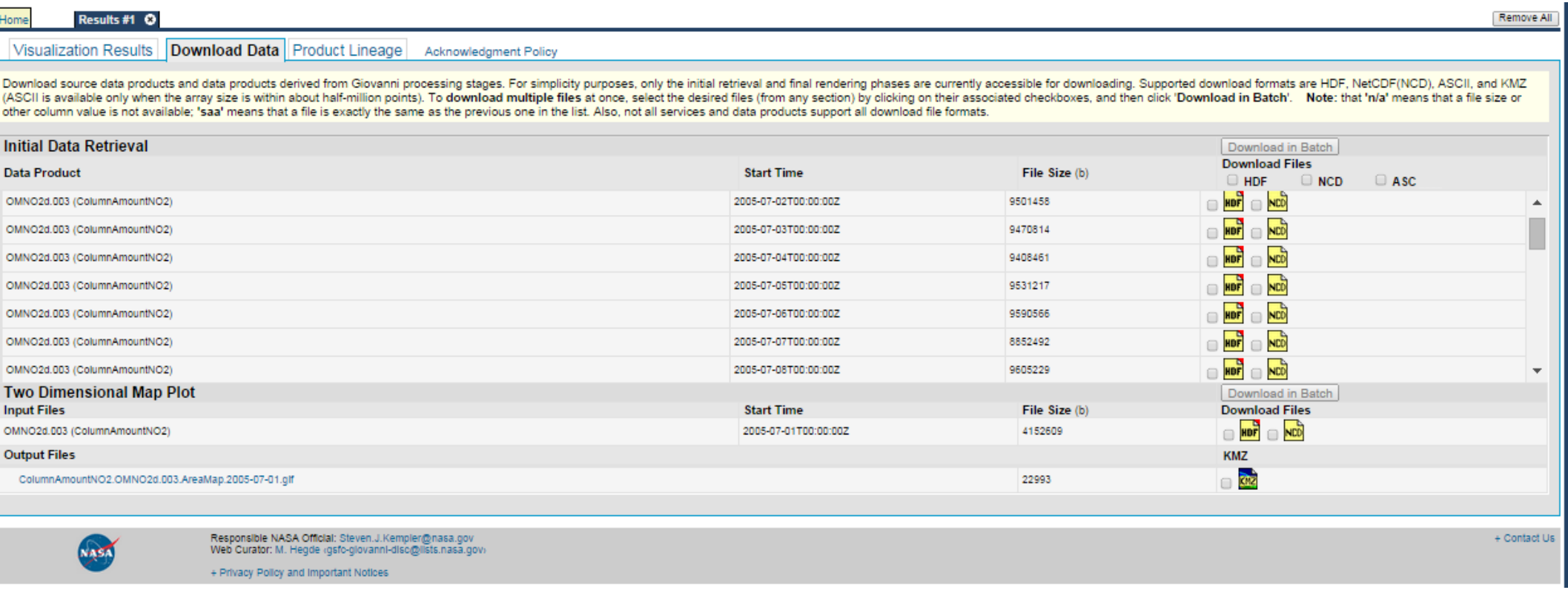




Visualization Results
showing areas of high NO2

You can submit refinements

- Geographically
- Parameter min, max

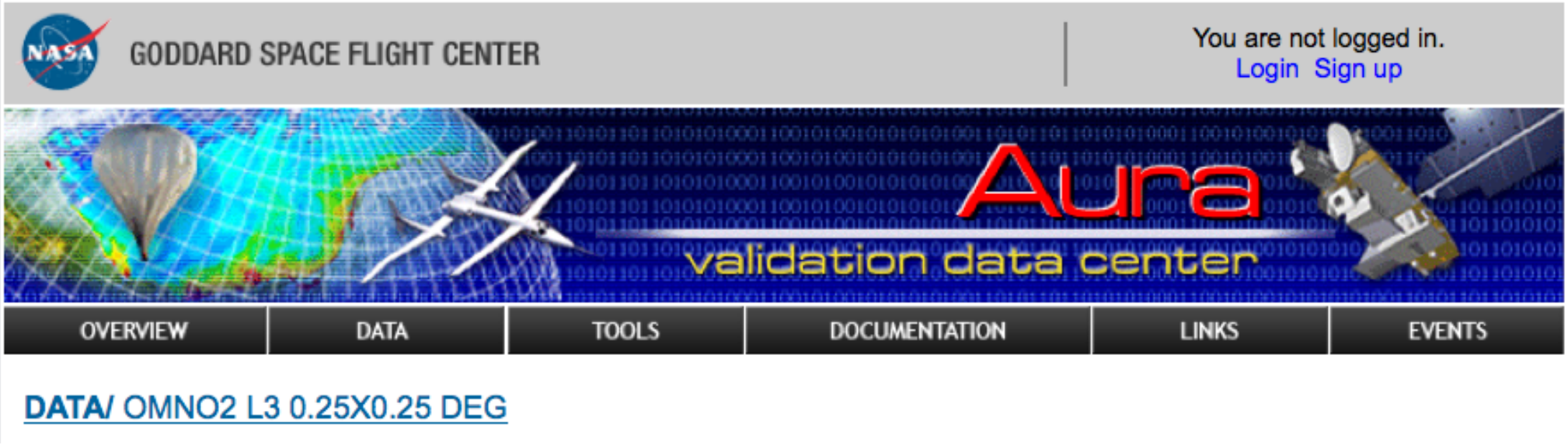


Data Download tab,

- Available in HDF, NetCDF, KMZ, gif
- If Subsetted, that data is downloaded under the Two Dimensional Map Plot section

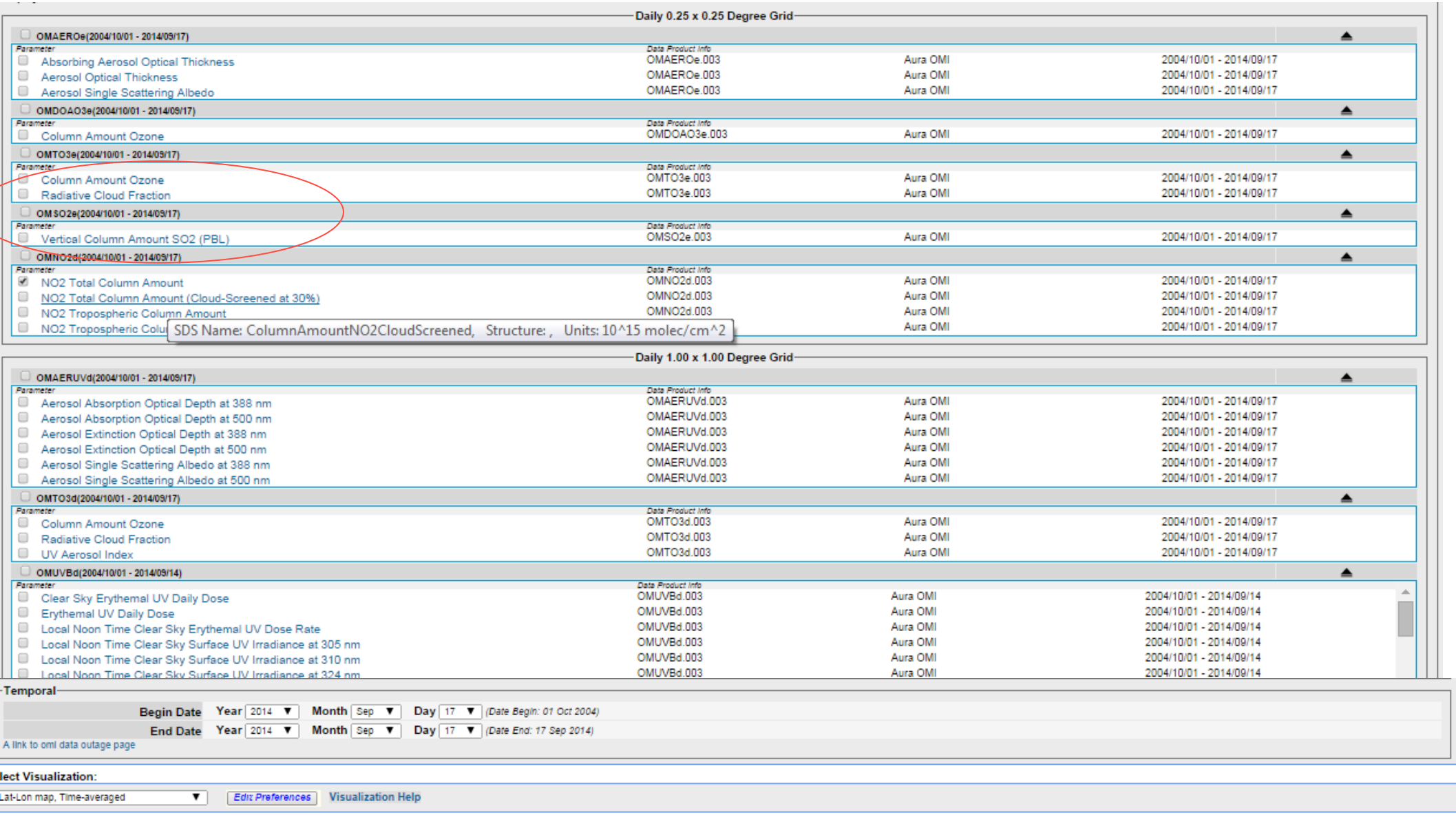
AVDC - Aura Validation Data Center

http://avdc.gsfc.nasa.gov/index.php?site=705441739



Use OMNO2d L3 product

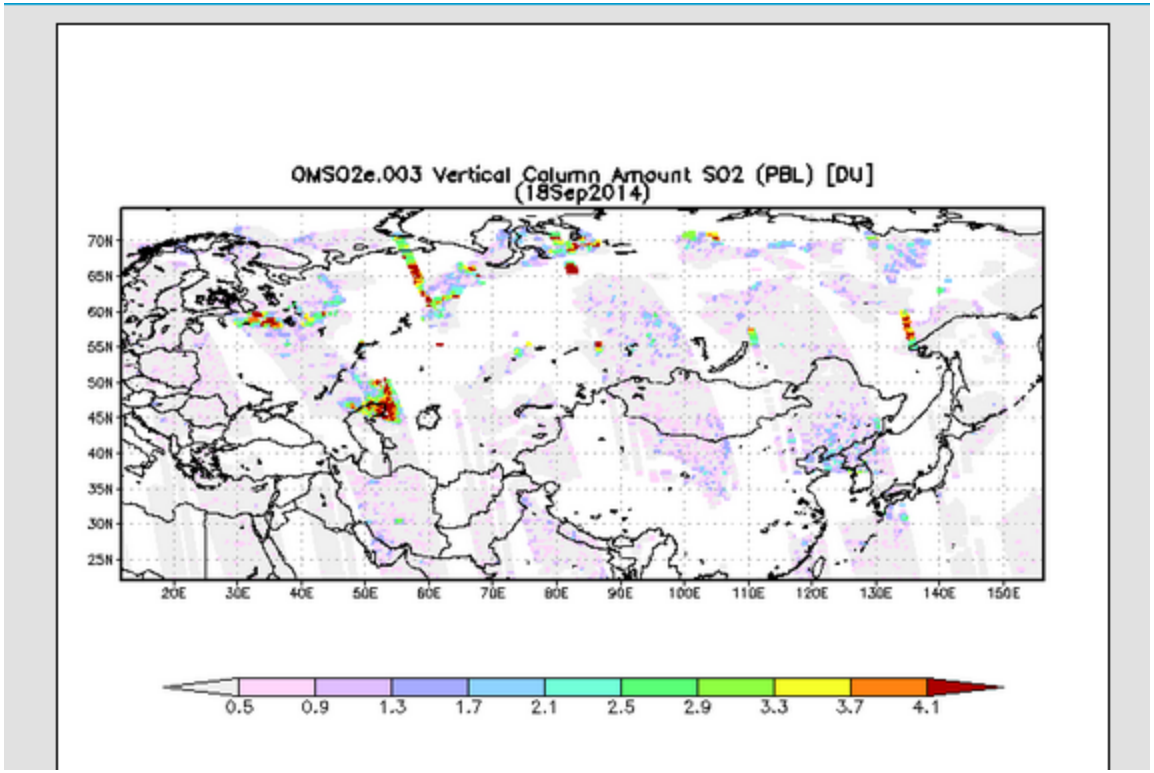
- 0.25 Gridded, cloud screened (Reflectivity < 0.3), images and data
- Data in HDF5, ASCII, KML formats
- Daily and Monthly data/images
- Total and Tropospheric data/images



Parameter List form Aura OMI

Vertical Column Amount SO2 (PBL), short name: OMSO2e.003

- Choose date range and Visualization type



Home | Result #1 | Result #2 | Results #3 | Remove All

Visualization Results | Download Data | Product Lineage | Acknowledgment Policy

Download source data products and data products derived from Giovanni processing stages. For simplicity purposes, only the initial retrieval and final rendering phases are currently accessible for downloading. Supported download formats are HDF, NetCDF(NCD), ASCII, and KMZ (ASCII is available only when the array size is within about half-million points). To **download multiple files** at once, select the desired files (from any section) by clicking on their associated checkboxes, and then click '**Download in Batch**'. **Note:** that '**n/a**' means that a file size or other column value is not available; '**saa**' means that a file is exactly the same as the previous one in the list. Also, not all services and data products support all download file formats.

Initial Data Retrieval — Download in Batch

Data Product	Start Time	File Size (b)	Download Files
OMSO2e.003 (ColumnAmountSO2_PBL)	2014-09-18T00:00:00Z	1499490	HDF NCD

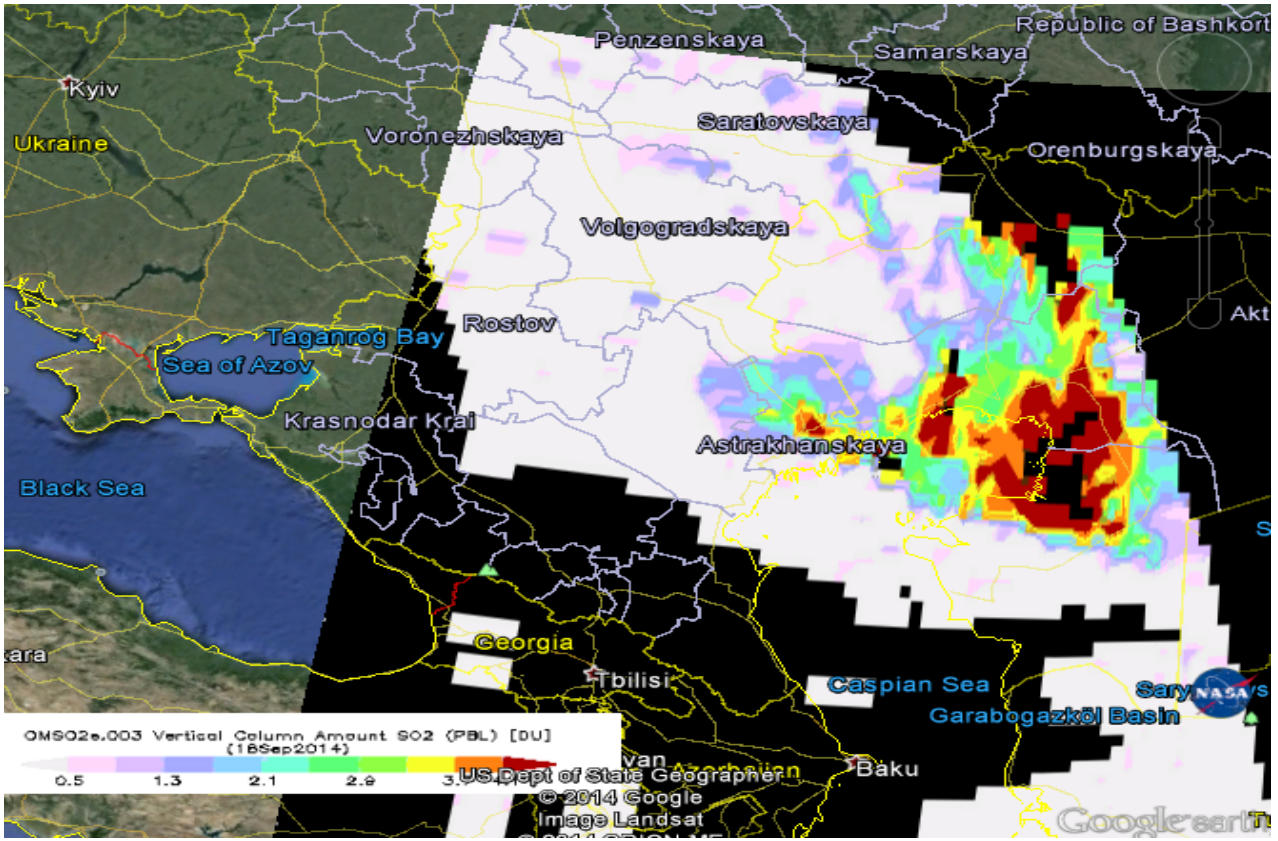
Two Dimensional Map Plot — Download in Batch

Input Files	Start Time	File Size (b)	Download Files
OMSO2e.003 (ColumnAmountSO2_PBL)	2014-09-18T00:00:00Z	206566	HDF NCD ASC
Output Files			KMZ
ColumnAmountSO2_PBL.OMSO2e.003.AreaMap.2014-09-18.gif		27688	KMZ

Responsible NASA Official: Steven.J.Kempler@nasa.gov
Web Curator: M. Hegde (gsfc-giovanni-disc@lists.nasa.gov)
+ Privacy Policy and Important Notices
+ Contact Us

- Visualization Results showing areas of high SO2

Data download, HDF, NetCDF, KMZ, gif



- KMZ in Google Earth, Kazakhstan
- High SO2, possible industrial activity

http://arset.gsfc.nasa.gov/airquality/applications/trace-gases/omi-no2-data-and-imagery

OMI NO2 Data and Imagery

Type/Source	File/Product Name	Product Level	Format	Resolution	Source/Link
Standard Product	OMN02G	L2	HDF5	0.25 x 0.25 Degrees (Not cloud screened)	Goddard DISC
Standard Product	OMNO2e	3	HDF5	0.25 x 0.25 Degrees (cloud screened)	Goddard DISC
Near Real Time	DOMINO	L2	HDF5 Images: gif	13x24km-nadir 13x128 km (swath edge)	DUTCH KNMI Temis Site
Aura Validation Data Center	NO2TropCS30	L3	HDF, ASCII Images: KML, jpg	0.05 x 0.05 Degrees (cloud screened)	Aura AVDC
Aura Validation Data Center	NO2TropCS30	L3	HDF, ASCII Images: KML, jpg	0.25 x 0.25 Degrees (cloud screened)	Aura AVDC
Giovanni subset data	OMN02e	L3	HDF, ASCII, NetCDF Images: KML, jpg	0.25 x 0.25 Degrees (cloud screened)	Giovanni Site
Berkeley High Resolution NO2 Product	U.S. product only	L2	HDF, ASCII	0.05 x 0.05 Degrees	BEHR site

‹ FAQ's up OMI SO2 Data ›

http://arset.gsfc.nasa.gov/airquality/applications/trace-gases/omi-so2-data

OMI SO2 Data

Type/Source	File/Product Name	Product Level	Format	Resolution	Source/Link
Standard Product	OMSO2G, PBL, TRL, TRM	L2G	HDF5	0.25 x 0.25 Degrees (Not cloud screened)	Goddard DISC
Standard Product	OMSO2E, PBL	L3	HDF5, NetCDF	0.25 x 0.25 Degrees (cloud screened)	Goddard DISC
Giovanni subset data	OMSO2e	L3	HDF, NETCDF, ASCII	0.25 x 0.25 Degrees (cloud screened)	Giovanni Site

‹ OMI NO2 Data and Imagery up OMI SO2 Images ›

Carbon Monoxide Data Access

GIOVANNI
http://disc.sci.gsfc.nasa.gov/giovanni

AIRS Near-Real Time (NRT) Products and Images (PNG, GeoTIFF, KMZ)
http://disc.sci.gsfc.nasa.gov/nrt/data-holdings/airs-nrt-products/

AIRS Level 2 Data Products
http://disc.sci.gsfc.nasa.gov/AIRS/data-holdings/by-data product/data_products.shtml

EOSDISC Reverb global search tool: http://reverb.echo.nasa.gov

Mirador Search/Get date: http://mirador.gsfc.nasa.gov

AIRS Homepage: http://airs.jpl.nasa.gov/

MOPITT Homepage: http://www.acd.ucar.edu/mopitt/

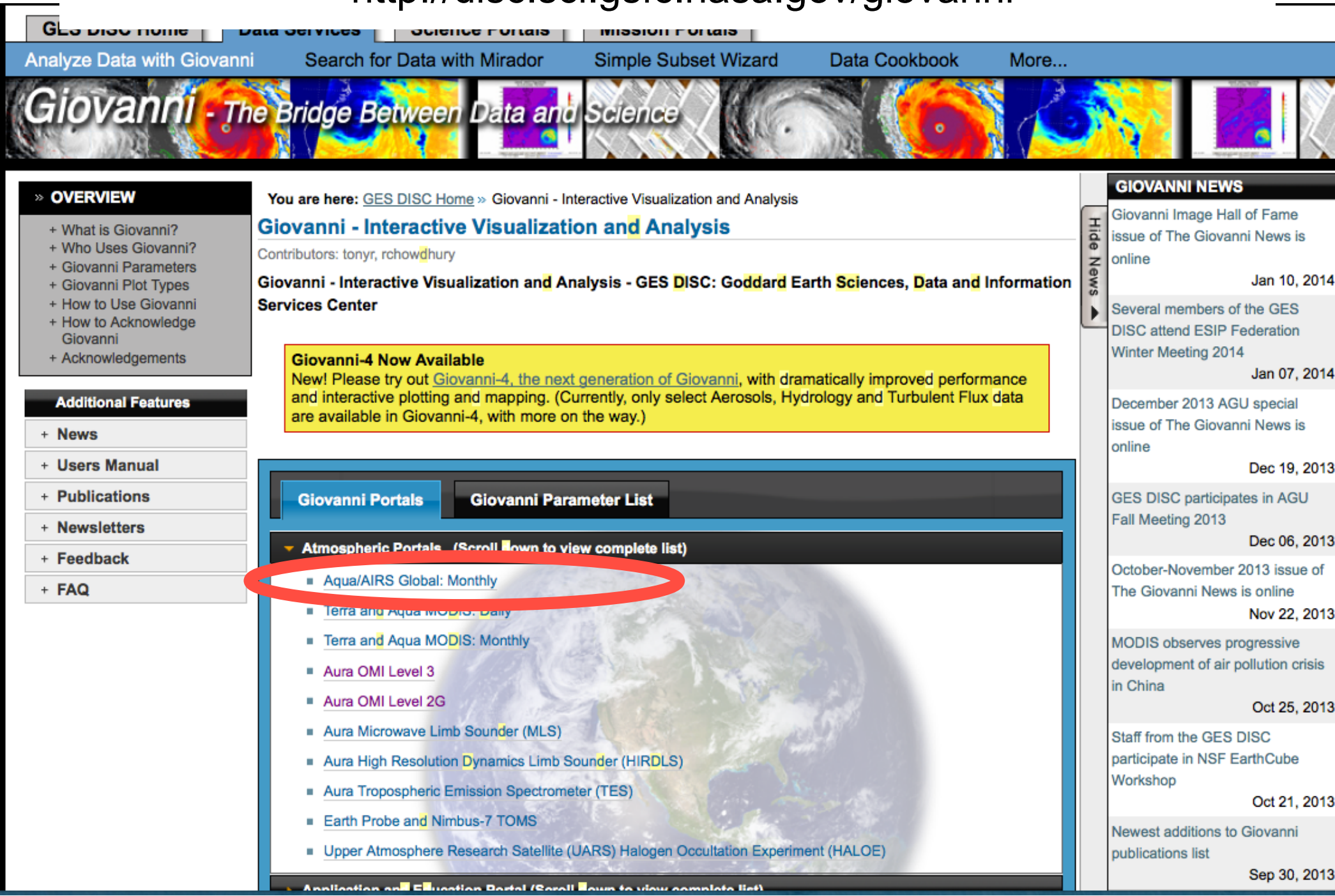
MOPITT Daily/Monthly images:

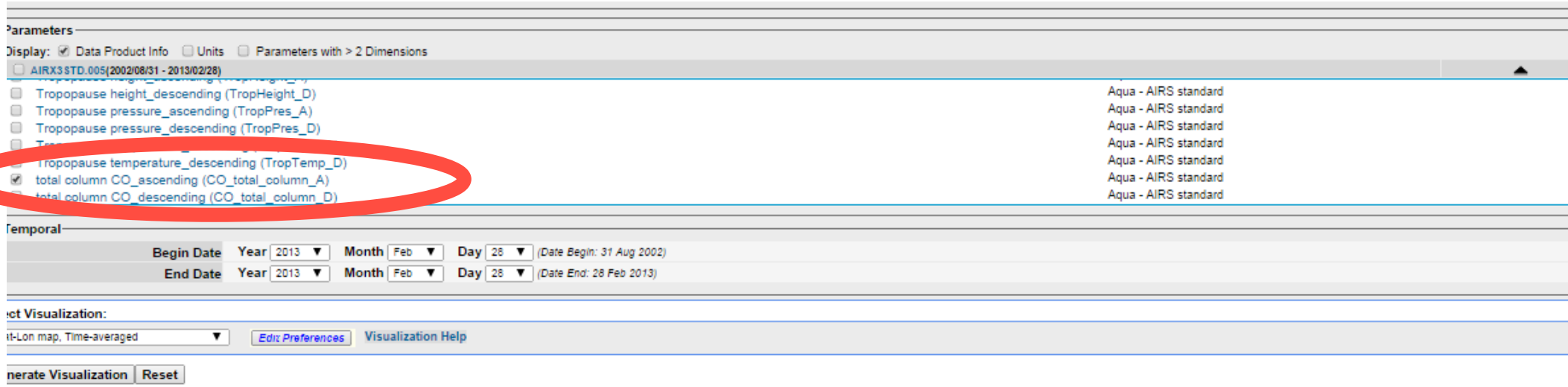
http://www.acd.ucar.edu/mopitt/visualize.shtml

http://mopfl.acd.ucar.edu:8080/webviewV4/selectmopittfile

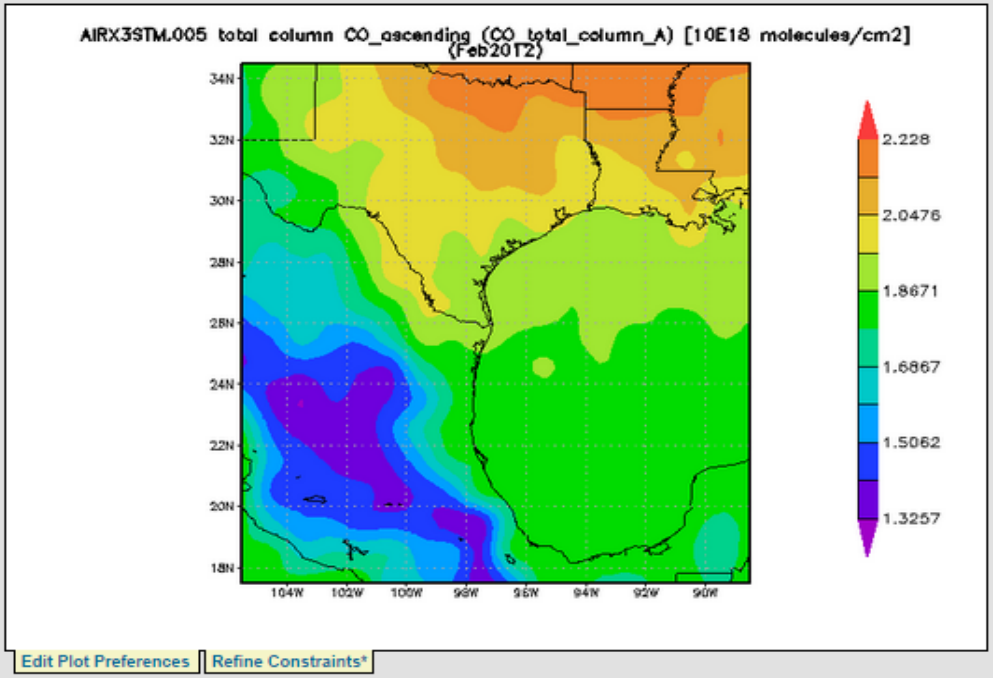
GIOVANNI – Visualization/Exploratory Tool

http://disc.sci.gsfc.nasa.gov/giovanni





Total column CO_ascending (CO_total_column_A)



MOPITT V6 Level 2 and 3 products include:

Homepage: http://www2.acd.ucar.edu/mopitt

A **TIR-only** product, similar to the MOPITT V4 product and V5 TIR-only product. *Example filename: MOP02T-20010101-L2V16.2.1.he5.*

A **NIR-only** product, similar to the MOPITT V5 NIR-only product. This dataset is produced only for daytime observations over land. This product exhibits relatively large random errors and may require significant spatial and/or temporal averaging. *Example filename: MOP02N-20010101-L2V16.2.2.he5*.

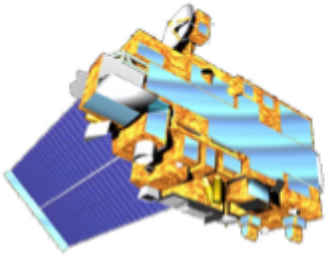
A **TIR/NIR** product, featuring the maximum sensitivity to near-surface CO. In this product, information from the NIR channels is exploited only in daytime observations over land. This product exhibits relatively large random errors and may require significant spatial and/or temporal averaging. *Example filename: MOP02J-20010101-L2V16.2.3.he5*.

Homepage: http://www.acd.ucar.edu/mopitt/

MEASUREMENTS OF POLLUTION IN THE TROPOSPHERE (MOPITT)

THE MOPITT MISSION

MOPITT is an instrument flying on NASA's Earth Observing System Terra spacecraft, measuring tropospheric carbon monoxide (CO) on the global scale. MOPITT measurements enable scientists to analyze the distribution, transport, sources and sinks of CO, a trace gas produced by methane oxidation, fossil fuel consumption and biomass burning. MOPITT has been operational since March 2000.



MOPITT PRODUCT AVAILABILITY

MOPITT Version 6 Level 2 and Level 3 products are now available for the entire MOPITT mission. Generally, V6 Level 2 and Level 3 products should become available between three weeks and two months after the actual observations; this data latency is the result of the dependency on the MERRA reanalysis. Version 4 and Version 5 Level 2 and Level 3 products are also available. See Data Products for descriptions of the different products. User's Guides available on the Publications page should be consulted before attempting to analyze the MOPITT products.

Uses Level 3 1x1 degree gridded data with downloadable KMZ for Google Earth

MOPITT PRODUCT VISUALIZATION

Global plots of MOPITT CO products at 1 degree horizontal resolution can be viewed for each day and month of the MOPITT mission.

V6 Plots

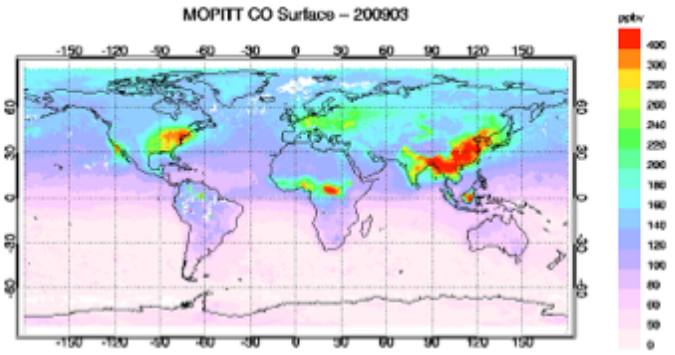
- V6 TIR-only Daily Plots / Monthly Plots
- V6 NIR-only Daily Plots / Monthly Plots
- V6 TIR/NIR Daily Plots / Monthly Plots

V5 Plots

- V5 TIR-only Daily Plots / Monthly Plots
- V5 NIR-only Daily Plots / Monthly Plots
- V5 TIR/NIR Daily Plots / Monthly Plots

V4 Plots

- V4 TIR-only Daily Plots / Monthly Plots



- Interactive Data Viewers for V4, V5, and V6 MOPITT products

VISUALIZATION

QUICK-LOOK IMAGES

Global plots of MOPITT CO products at 1 degree horizontal resolution can be viewed for each day and month of the MOPITT mission. See the News and Status page for dates of, and reasons for, missing data.

V6 Plots

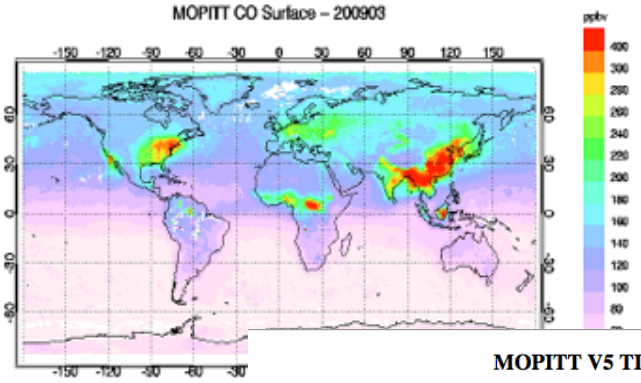
- V6 TIR-only Daily Plots / Monthly Plots
- V6 NIR-only Daily Plots / Monthly Plots
- V6 TIR/NIR Daily Plots / Monthly Plots

V5 Plots

- V5 TIR-only Daily Plots / Monthly Plots
- V5 NIR-only Daily Plots / Monthly Plots
- V5 TIR/NIR Daily Plots / Monthly Plots

V4 Plots

- V4 TIR-only Daily Plots / Monthly Plots



MOPITT V5 TIR/NIR Daytime CO Retrievals - Quick-look Images

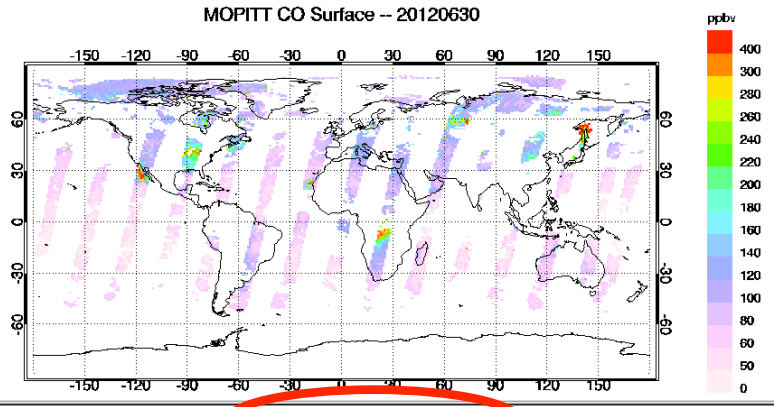
YEAR MONTH DAY LEVEL

MOPITT Data page PLOT
Monthly Average Plots 2013 3 8 Column PREVIOUS
NEXT

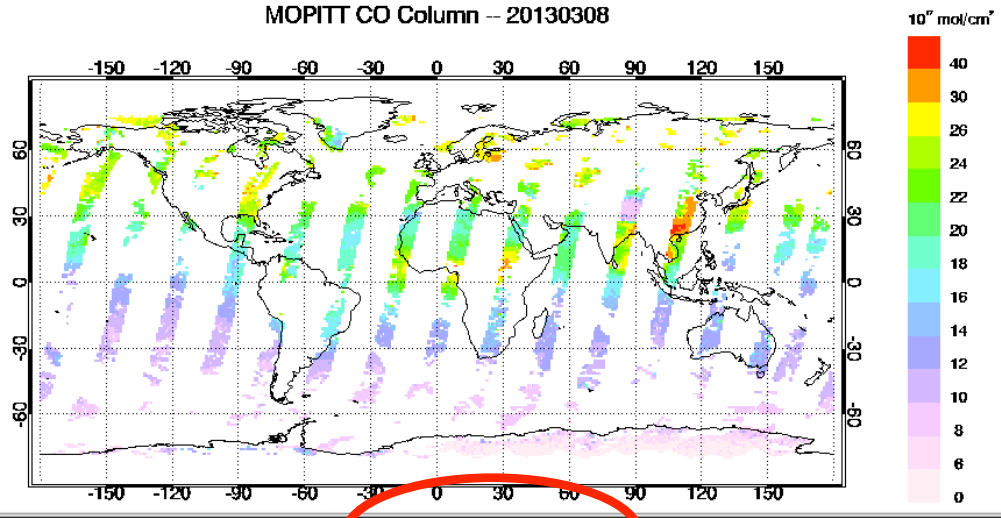
MOPITT V5 TIR/NIR Daytime CO Retrievals - Quick-look Images

YEAR MONTH DAY LEVEL

MOPITT Data page PLOT
Monthly Average Plots 2012 6 30 Surface PREVIOUS
NEXT



MOPITT Google Earth File



MOPITT Google Earth File

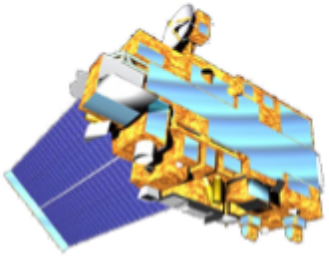
MOPITT now has an interactive visualizer

Homepage: http://www.acd.ucar.edu/mopitt/

MEASUREMENTS OF POLLUTION IN THE TROPOSPHERE (MOPITT)

THE MOPITT MISSION

MOPITT is an instrument flying on NASA's Earth Observing System Terra spacecraft, measuring tropospheric carbon monoxide (CO) on the global scale. MOPITT measurements enable scientists to analyze the distribution, transport, sources and sinks of CO, a trace gas produced by methane oxidation, fossil fuel consumption and biomass burning. MOPITT has been operational since March 2000.



MOPITT PRODUCT AVAILABILITY

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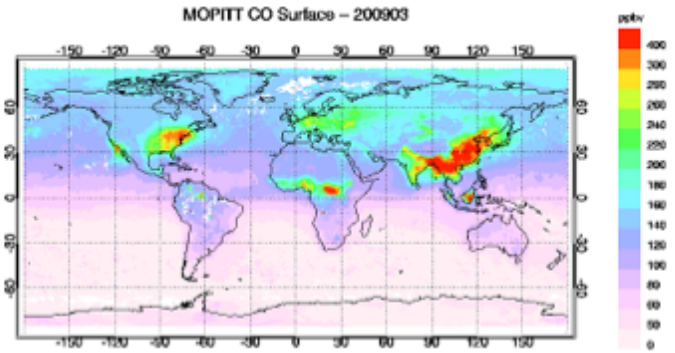
- NASA Data Archives via Reverb
- ASDC Data Pool
- ASDC MOPITT Subsetter (V5 Level 2 Products only)

MOPITT PRODUCT VISUALIZATION

Global plots of MOPITT CO products at 1 degree horizontal resolution can be viewed for each day and month of the MOPITT mission.



V6 Plots

- V6 TIR-only Daily Plots / Monthly Plots
- V6 NIR-only Daily Plots / Monthly Plots
- V6 TIR/NIR Daily Plots / Monthly Plots

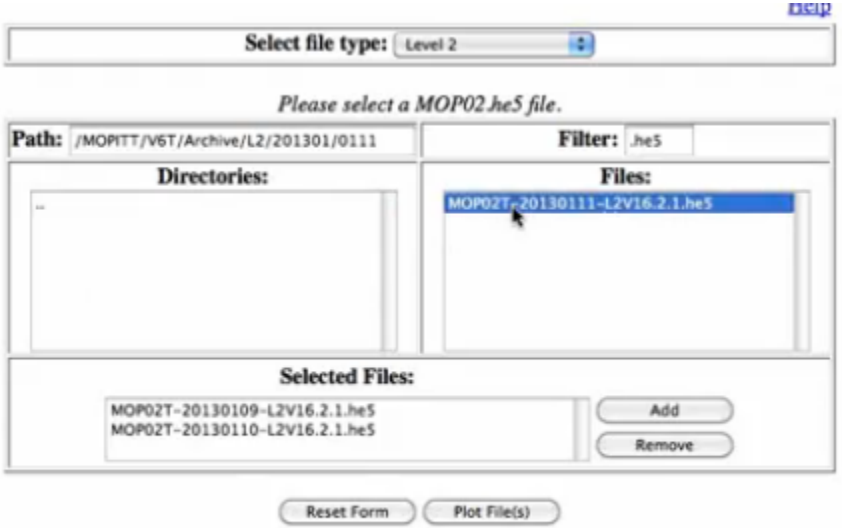
V5 Plots

- V5 TIR-only Daily Plots / Monthly Plots
- V5 NIR-only Daily Plots / Monthly Plots
- V5 TIR/NIR Daily Plots / Monthly Plots

V4 Plots

- V4 TIR-only Daily Plots / Monthly Plots

- Interactive Data Viewers for V4, V5, and V6 MOPITT products



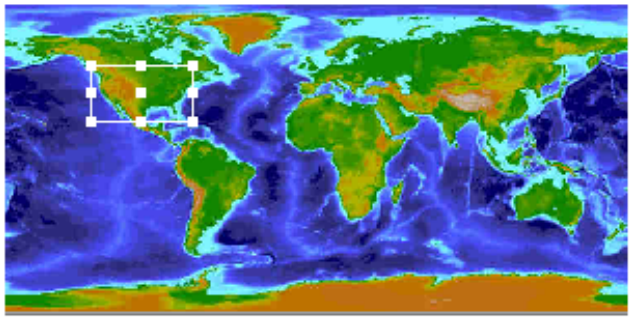
- Select Level 2
- Under directories, you choose your year, month and days, click to add to the files window
- Click on the file and it will be added to the Selected files window.
- Click Plot files

MOPITT Interactive Data Viewer: http://mopfl.acd.ucar.edu:8080/webviewV6/

Back Forward Print New Tab Home Reload Stop mopfl.acd.ucar.edu:8080/webviewV6/p MOPITT Downloads Adblock Plus

Most Visited News Popular Gourmet Greenbelt Google WORK Weather Gmail

Help



55.0 N

130.0 W 72.0 W

22.0 N

Zoom In Zoom Out

Current Files:

1. */MOPITT/V6T/Archive/L2/200006/0605/MOP02T-20000605-L2V16.2.1.he5*
2. */MOPITT/V6T/Archive/L2/201306/0626/MOP02T-20130626-L2V16.2.1.he5*

Select Level 2 variable to plot: RetrievedCOSurfaceMixingRatio

Projection	Colorbar	Plot Options
Cylindrical Equidistance	○ Data Max to Min ○ High - Low ◉ User Defined Min: 50.00000 ppbv Max: 300.000 ppbv	☐ Filled Pixels ☐ Black Background ☑ Political Boundaries Size: Medium

Time

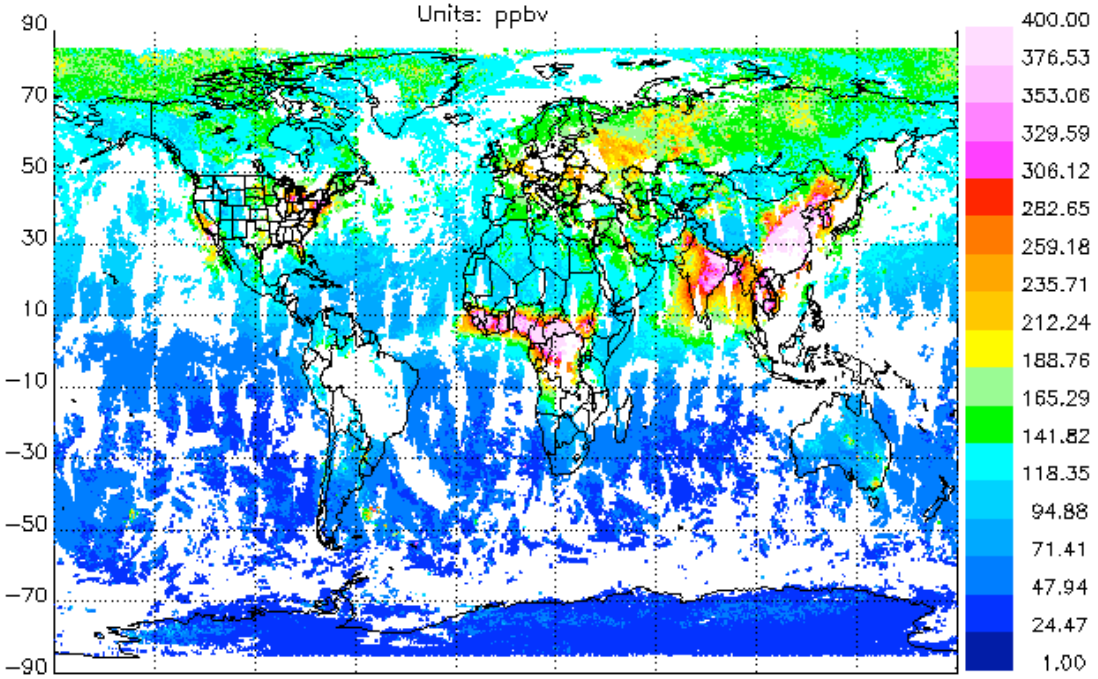
	Year	Month	Day	Hour	Minute	Second	Millisecond
Start	2013	6	26	0	0	16	897
End	2012	6	26	23	59	59	672

Return to File Selection | Reset Form | Export ASCII File | Plot

RetrievedCOSurfaceMixingRatio

2013-1-9 0:0:9.588 to 2013-1-12 0:0:6.771

Units: ppbv



Current Files:

1. */MOPITT/V6T/Archive/L2/201301/0109/MOP02T-20130109-L2V16.2.1.he5*
2. */MOPITT/V6T/Archive/L2/201301/0110/MOP02T-20130110-L2V16.2.1.he5*
3. */MOPITT/V6T/Archive/L2/201301/0111/MOP02T-20130111-L2V16.2.1.he5*

Select Level 2 variable to plot: RetrievedCOSurfaceMixingRatio

Projection

Cylindrical Equidistance

Colorbar

- ○ Data Max to Min
- ○ High - Low
- ◉ User Defined

Min: 1.00000 ppbv

Max: 400.000 ppbv

Plot Options

- ☐ Filled Pixels
- ☐ Black Background
- ☑ Political Boundaries

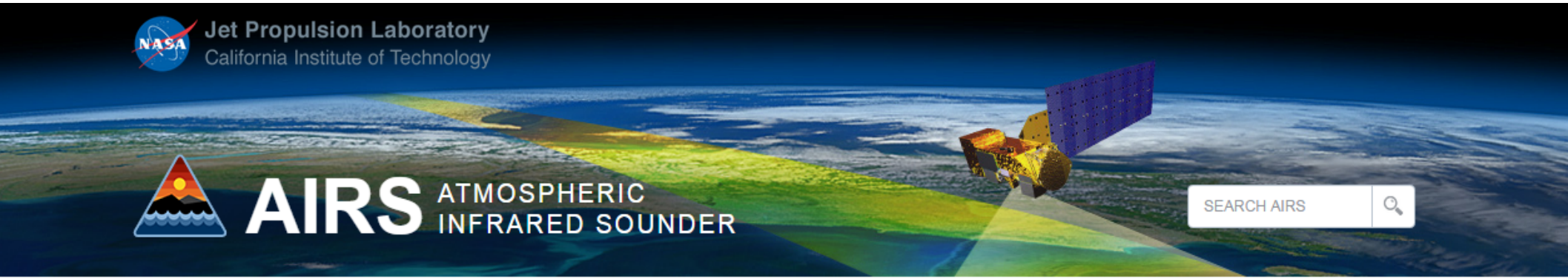
Size: Medium

Time

	Year	Month	Day	Hour	Minute	Second	Millisecond
Start	2013	1	9	0	0	9	588
End	2013	1	12	0	0	6	771

Return to File Selection | Reset Form | Export ASCII File | Plot

Access to AIRS data, documentation, and Imagery can be found in the AIRS homepage: http://airs.jpl.nasa.gov/



WEATHER & CLIMATE | MISSION & INSTRUMENT | DATA | RESOURCES | NEWS | EVENTS | PEOPLE | ASK AIRS

Weather and climate from space

EVENTS AND ANNOUNCEMENTS

- Register for the fall NASA Sounder Science Team Meeting
- Presentations from March 2014 Science Team Meeting now available
- AIRS data processed to Version 6

+ more events

AIRS DATA & PRODUCTS

- Products of Earth's atmosphere and surface
- Data product types
- Near real-time products
- Get AIRS data

+ more about data & products

https://airs.jpl.nasa.gov/data/get_data

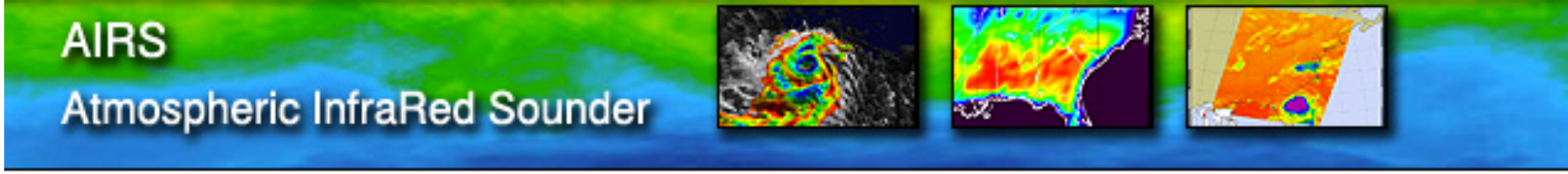
Data

Get AIRS Data

AIRS data is distributed by the NASA Goddard Earth Sciences Data Information and Services Center (DISC). At the DISC you will find information and tools designed to help you find the AIRS data you need.

Version 6 Level 2 and Level 3 Data Products ›

MORE
Product Accuracies
Data Readers
Validation
ATBDs
Granule Maps
Visualization Support
Carbon Dioxide
Earth Coverage



Product Information and access to AIRS data can be found here:
http://disc.sci.gsfc.nasa.gov/AIRS/data-holdings/by-data-product-V6

Take you to the **Mirador** search engine. There is the option to convert to Net CDF format

Goes to a product summary page with links to the Instrument and product documentation

Level 2 AIRS2RET and
Level 3 AIRS3STD are the standards daily products

AIRS Level-2 Products (Version 5): without-HSB // AIRS IR-Only // with-HSB

Data Product	Description	Spatial Resolution	Temporal Coverage	Average Item Size (Mb)	GES DISC Data Access
AIRX2RET	L2 standard retrieval product using AIRS IR and AMSU, without-HSB	45 km @ nadir; 28 atm pressure levels; 14 pressure layers for H2O related variables...	2002-08-30 - present	2.3	Search
AIRS2RET	L2 standard retrieval product using AIRS IR-only	45 km @ nadir; 28 atm pressure levels; 14 pressure layers for H2O related variables...	2007-05-31 - present	2.3	Search
AIRH2RET	L2 standard retrieval using AIRS IR and AMSU, with-HSB	45 km @ nadir; 28 atm pressure levels; 14 pressure layers for H2O related variables...	2002-08-30 - 2003-02-05	2.3	Search

AIRS Level-3 Products (Version 5): without-HSB // AIRS IR Only // with-HSB

Data Product	Description	Spatial Resolution	Temporal Coverage	Average Item Size(Mb)	GES DISC Data Access
AIRX3STD	L3 daily gridded standard retrieval product using AIRS IR and AMSU, without-HSB	1°x1°; 24 atm pressure levels; 12 pressure levels for H2O related variables.	2002-08-30 - present	71	Search
AIRS3STD	L3 daily gridded standard retrieval product using AIRS IR-only	1°x1°; 24 atm pressure levels; 12 pressure levels for H2O related variables.	2007-06-01 - present	54	Search
AIRH3STD	L3 daily gridded standard retrieval product using AIRS IR and AMSU, with-HSB	1°x1°; 24 atm pressure levels; 12 pressure levels for H2O related variables.	2002-08-30 - 2003-02-05	75	Search

Mirador Earth Science Data Search Tool

http://mirador.gsfc.nasa.gov/cgi-bin/mirador/homepageAlt.pl?keyword=AIRS2R

Greenbelt News Popular SSAI Weather Google Gmail Dictionary.com SEACIONS WORK

Mirador Earth Science Data Searc... | http://disc.sci.gsfc.nasa.gov/AIRS...

You are here: Keyword Search

Keyword | Projects | Science A

Keyword: AIRS2RET Time Span: 2012-07-04 To: 2012-07-04

Location: (24.69,-126.04),(51.94,-73.6 Update Map Search GES-DISC

Advanced Search

Keyword | Projects | Science Areas

Data Sets Results 1 - 1 of 1 for **AIRS2RET** (1 seconds)

-More Services (e.g. http download, format conversion, subsets etc) are available for the data set(s). Whenever you add files to the shopping cart, you will be presented with options for selecting a service and service parameters for any data set which has these services.

AIRS/Aqua Level 2 Standard physical retrieval (AIRS-only) (AIRS2RET)

View Files | Info | Data Calendar

Approx. 16 files found (Avg Size: 2.075 MB)
Parameters: SKIN TEMPERATURE, SURFACE AIR TEMPERATURE, AIR TEMPERATURE, TROPOPAUSE, PRECIPITABLE WATER, WATER VAPOR, OXYGEN COMPOU...
Spatial Resolution: 50 km x 50 km
Temporal Resolution: 6 Minutes

Select All | Reset | List Selected Files By Time | See Timeline View | Add Selected Files To Cart

NASA Search Results
(Number of **files found** may not be entirely accurate)
Page: 1

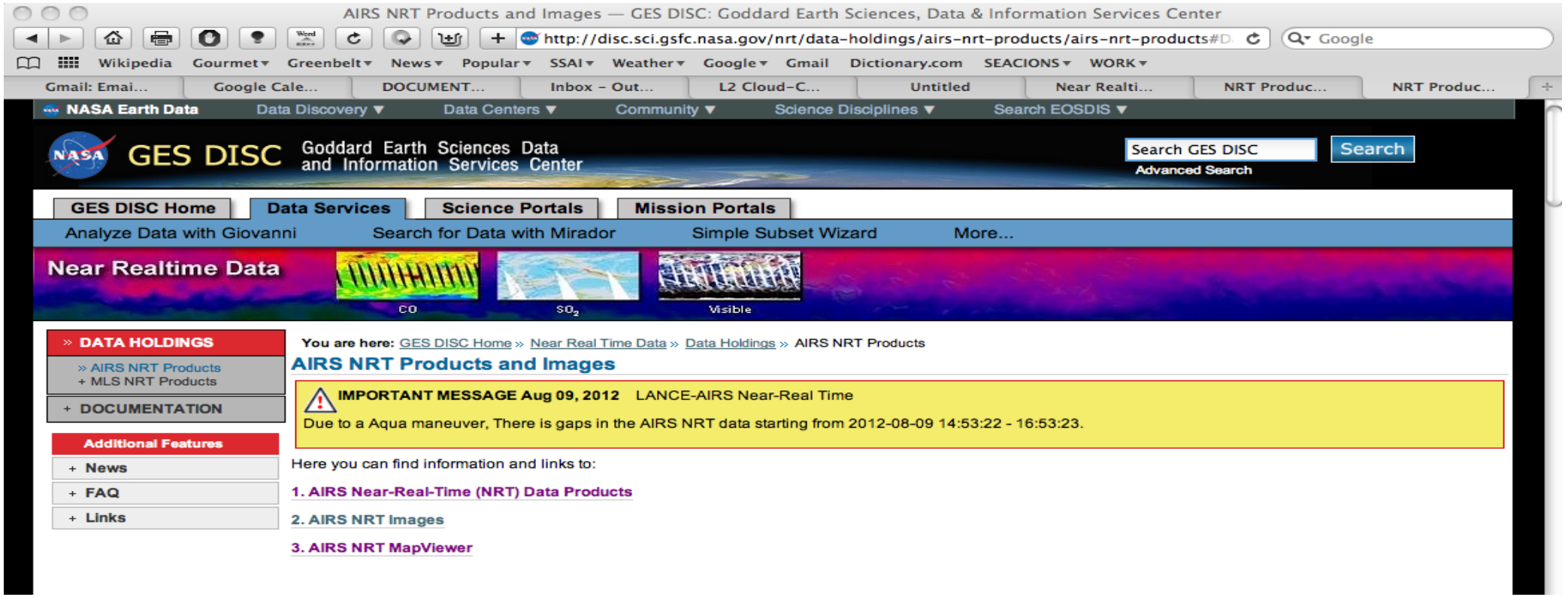
Select All in Page	Start Time
AIRS.2012.07.04.214.L2.RetStd_IR.v5.0.14.0.G12187114452.hdf (2.06 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 21:23:23 (Day) Metadata
AIRS.2012.07.04.213.L2.RetStd_IR.v5.0.14.0.G12187114451.hdf (2.05 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 21:17:23 (Day) Metadata
AIRS.2012.07.04.212.L2.RetStd_IR.v5.0.14.0.G12187114454.hdf (2.05 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 21:11:23 (Day) Metadata
AIRS.2012.07.04.197.L2.RetStd_IR.v5.0.14.0.G12187114418.hdf (2.07 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 19:41:23 (Day) Metadata
AIRS.2012.07.04.196.L2.RetStd_IR.v5.0.14.0.G12187114402.hdf (2.12 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 19:35:23 (Day) Metadata
AIRS.2012.07.04.181.L2.RetStd_IR.v5.0.14.0.G12187114340.hdf (2.13 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 18:05:23 (Day) Metadata
AIRS.2012.07.04.180.L2.RetStd_IR.v5.0.14.0.G12187114355.hdf (2.10 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 17:59:23 (Day) Metadata
AIRS.2012.07.04.179.L2.RetStd_IR.v5.0.14.0.G12187114334.hdf (2.15 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 17:53:23 (Day) Metadata
AIRS.2012.07.04.164.L2.RetStd_IR.v5.0.14.0.G12187113502.hdf (2.06 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 16:23:23 (Day) Metadata
AIRS.2012.07.04.118.L2.RetStd_IR.v5.0.14.0.G12187103555.hdf (1.95 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 11:47:23 (Both) Metadata
AIRS.2012.07.04.103.L2.RetStd_IR.v5.0.14.0.G12187113355.hdf (2.06 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 10:17:23 (Night) Metadata
AIRS.2012.07.04.102.L2.RetStd_IR.v5.0.14.0.G12187113353.hdf (2.04 MB) One Click Download: HDF (Quality Screened) | HDF (FTP) | HDF (HTTP) | NetCDF | OPeNDAP	2012-07-04 10:11:23 (Night) Metadata

Access to AIRS NRT Trace Gas Products

AIRS NRT Products and Images Website: http://disc.sci.gsfc.nasa.gov/nrt/data-holdings/airs-nrt-products/

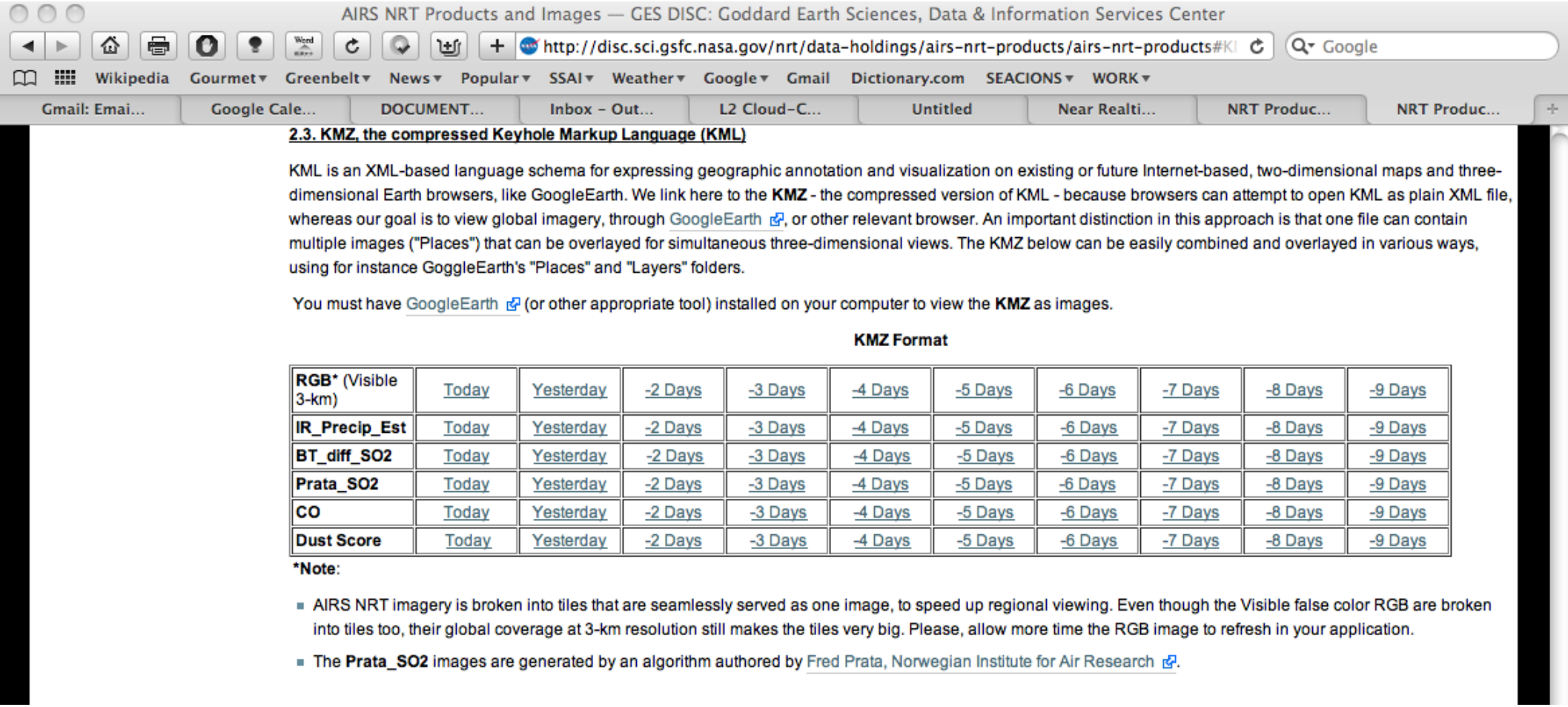
There is a **Near-Real Time (NRT)** product that exports KMZ files but is available for data going back 9 days only. This product is great for capturing events **as they happen!**

NRT Level 2 data, PNG, GeoTIFF, and KMZ files are availabe at this site. **BUT historic data is not available.**



AIRS NRT Products and Images Website:
http://disc.sci.gsfc.nasa.gov/nrt/data-holdings/airs-nrt-products/

To get KMZ files for Google Earth:
1. click on “2. AIRS NRT Images”
2.Click on where it says ‘KMZ’



2.3. KMZ, the compressed Keyhole Markup Language (KML)

KML is an XML-based language schema for expressing geographic annotation and visualization on existing or future Internet-based, two-dimensional maps and three-dimensional Earth browsers, like GoogleEarth. We link here to the **KMZ** - the compressed version of KML - because browsers can attempt to open KML as plain XML file, whereas our goal is to view global imagery, through GoogleEarth, or other relevant browser. An important distinction in this approach is that one file can contain multiple images ("Places") that can be overlayed for simultaneous three-dimensional views. The KMZ below can be easily combined and overlayed in various ways, using for instance GoggleEarth's "Places" and "Layers" folders.

You must have GoogleEarth (or other appropriate tool) installed on your computer to view the **KMZ** as images.

KMZ Format

RGB* (Visible 3-km)	Today	Yesterday	-2 Days	-3 Days	-4 Days	-5 Days	-6 Days	-7 Days	-8 Days	-9 Days
IR_Precip_Est	Today	Yesterday	-2 Days	-3 Days	-4 Days	-5 Days	-6 Days	-7 Days	-8 Days	-9 Days
BT_diff_SO2	Today	Yesterday	-2 Days	-3 Days	-4 Days	-5 Days	-6 Days	-7 Days	-8 Days	-9 Days
Prata_SO2	Today	Yesterday	-2 Days	-3 Days	-4 Days	-5 Days	-6 Days	-7 Days	-8 Days	-9 Days
CO	Today	Yesterday	-2 Days	-3 Days	-4 Days	-5 Days	-6 Days	-7 Days	-8 Days	-9 Days
Dust Score	Today	Yesterday	-2 Days	-3 Days	-4 Days	-5 Days	-6 Days	-7 Days	-8 Days	-9 Days

***Note**:

- AIRS NRT imagery is broken into tiles that are seamlessly served as one image, to speed up regional viewing. Even though the Visible false color RGB are broken into tiles too, their global coverage at 3-km resolution still makes the tiles very big. Please, allow more time the RGB image to refresh in your application.
- The **Prata_SO2** images are generated by an algorithm authored by Fred Prata, Norwegian Institute for Air Research.

Note: These NRT data are in parts per billion
A = Ascending (daytime) and D = Descending (nighttime) are included.